

Title (en)

LOW-ADHESION COATINGS WITH SOLID-STATE LUBRICANTS

Title (de)

HAFTARME BESCHICHTUNGEN MIT FESTSCHMIERSTOFFEN

Title (fr)

REVÊTEMENTS À FAIBLE ADHÉRENCE AVEC LUBRIFIANTS À L'ÉTAT SOLIDE

Publication

EP 3478786 A2 20190508 (EN)

Application

EP 17821312 A 20170630

Priority

- US 201662356867 P 20160630
- US 201715638340 A 20170629
- US 2017040153 W 20170630

Abstract (en)

[origin: WO2018005896A2] Some variations provide a low-adhesion coating comprising a continuous matrix containing a first component, a plurality of inclusions containing a second component, and a solid-state lubricant distributed within the coating, wherein one of the first component or the second component is a low-surface-energy polymer, and the other of the first component or the second component is a hygroscopic material. The solid-state lubricant may be selected from graphite, graphene, molybdenum disulfide, tungsten disulfide, hexagonal boron nitride, or poly(tetrafluoroethylene) or other fluoropolymers. The solid-state lubricant particles may be coated with a metal selected from cadmium, lead, tin, zinc, copper, nickel, or alloys containing one or more of these metals. The solid-state lubricant is typically characterized by an average particle size from about 0.1 microns to about 500 microns. The solid-state lubricant is preferably distributed throughout the coating.

IPC 8 full level

C09J 127/12 (2006.01); **C09D 127/12** (2006.01); **C09J 11/04** (2006.01); **C09J 11/06** (2006.01); **C09J 11/08** (2006.01)

CPC (source: EP)

C08G 18/10 (2013.01); **C08G 18/246** (2013.01); **C08G 18/3206** (2013.01); **C08G 18/5015** (2013.01); **C08G 18/6677** (2013.01); **C08G 18/758** (2013.01); **C08G 65/007** (2013.01); **C09D 171/00** (2013.01); **C09D 171/02** (2013.01); **C09D 175/08** (2013.01); **C09J 11/04** (2013.01); **C09J 11/06** (2013.01); **C09J 11/08** (2013.01)

C-Set (source: EP)

1. **C08G 18/10 + C08G 18/3206**
2. **C09D 175/08 + C08K 3/04**
3. **C09D 175/08 + C08K 3/30**

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2018005896 A2 20180104; **WO 2018005896 A3 20180222**; **WO 2018005896 A4 20180511**; CN 109563386 A 20190402; EP 3478786 A2 20190508; EP 3478786 A4 20200318

DOCDB simple family (application)

US 2017040153 W 20170630; CN 201780047673 A 20170630; EP 17821312 A 20170630